



Supporting Parents and Strengthening Families Through Reach Out and Read

Marny Dunlap, MD

April 14, 2015



- I have no financial disclosures or conflicts of interest.

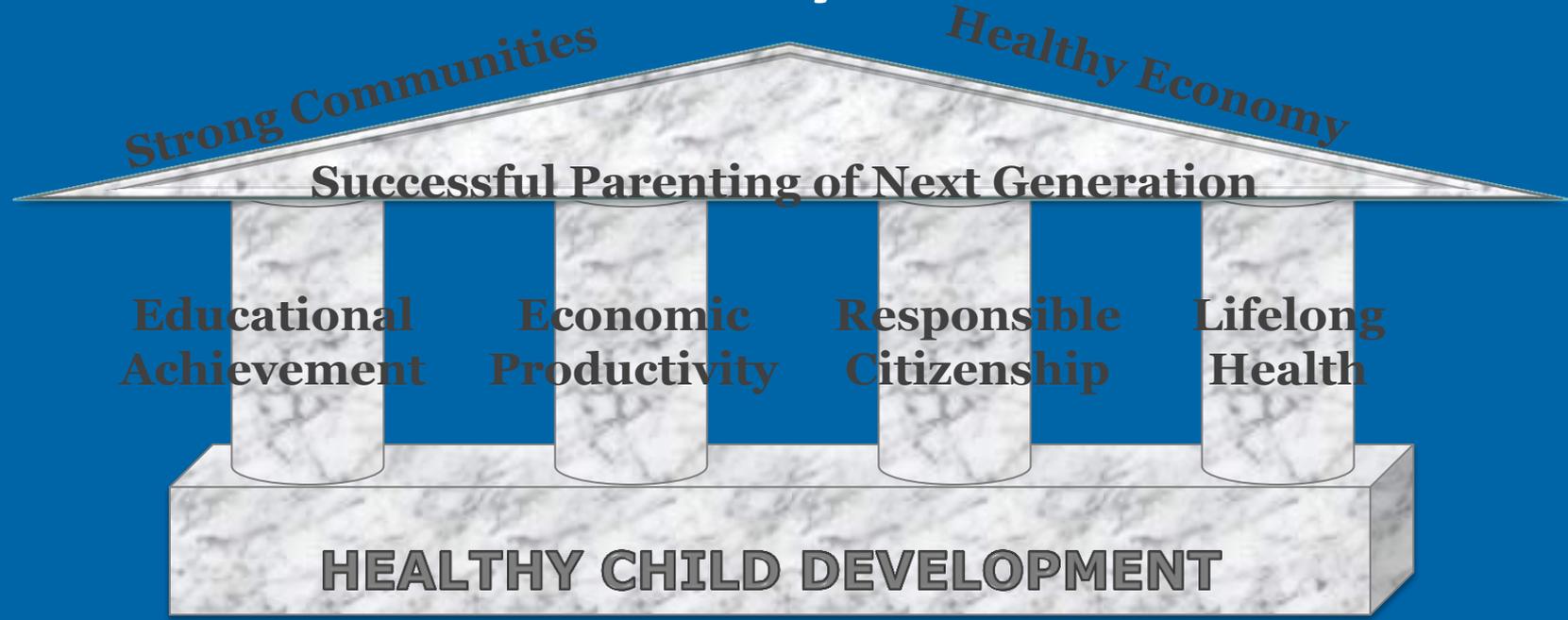


Reach Out and Read

Reach Out and Read prepares America's youngest children to succeed in school by partnering with doctors to prescribe books and encourage families to read together.



The Foundation of a Successful Society is Built in Early Childhood



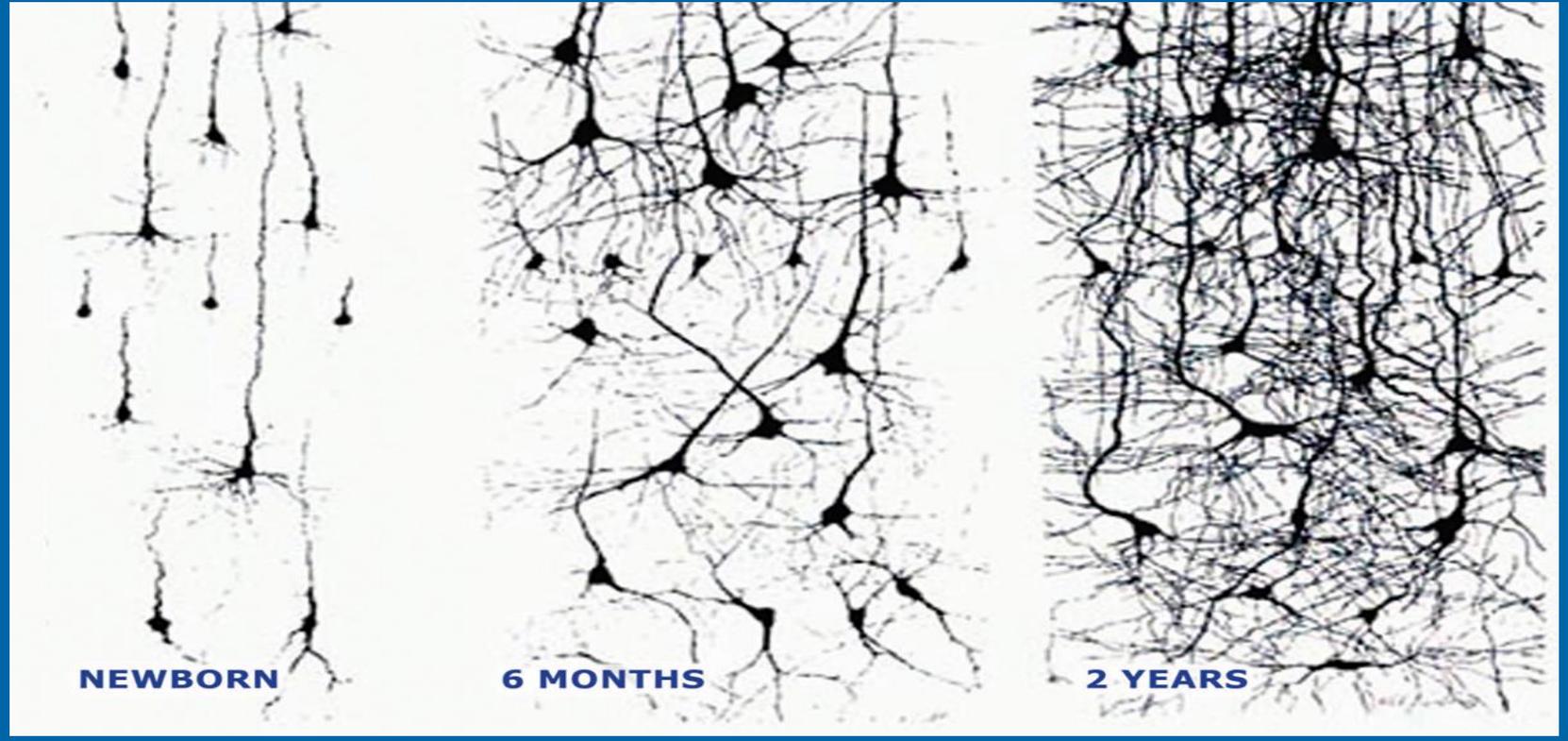


Early Brain and Child Development

Brain architecture and developing abilities are built “from the bottom up” via simple circuits and skills which provide the scaffolding for more advanced circuits and skills over time.



700 New Neural Connections per Second



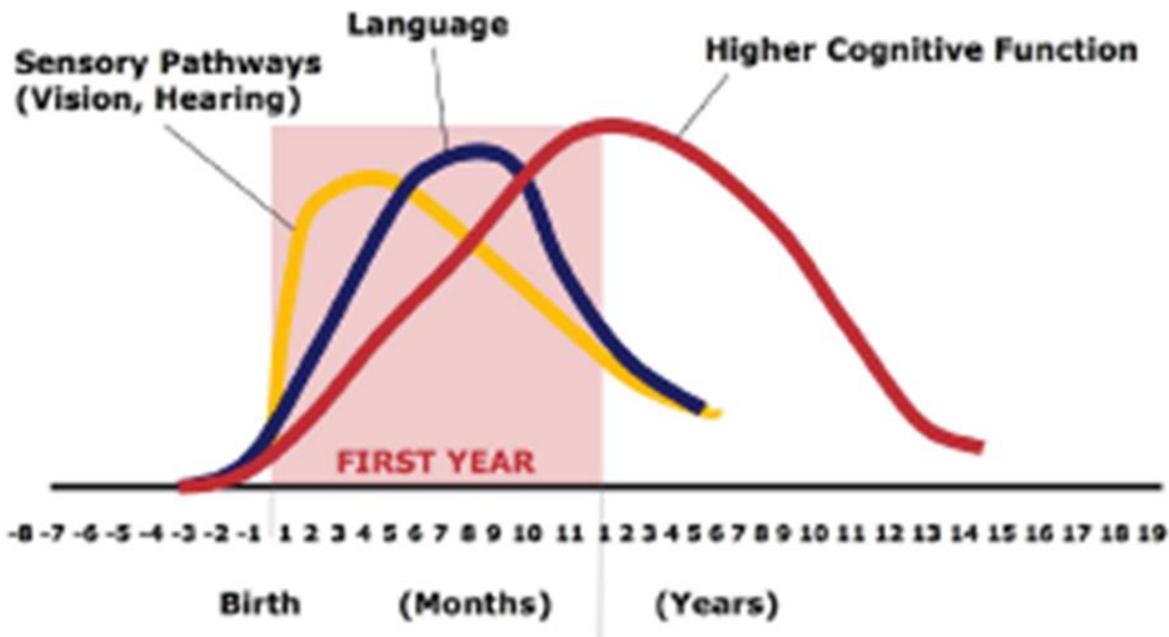
Reach
Out and
Read®



Center on the Developing Child
HARVARD UNIVERSITY

Human Brain Development

Neural Connections for Different Functions Develop Sequentially



Source: C.A. Nelson (2003)



Foundation for Executive Function Skills is Built in Early Childhood

- Self-Control – ability to filter thoughts and impulses to resist temptations and distractions
- Working Memory – ability to hold and manipulate information in our heads over short periods of time
- Mental Flexibility – adjusting to changing demands, priorities, or perspectives



Critical Factors in Developing a Strong Foundation for Executive Function Skills

- Children's Relationships – consistent reliable adults who support and protect them, and model and engage them in building executive function skills
- Activities - the opportunity to engage in activities that reduce stress, foster social connection, incorporate vigorous physical activity, and increase the complexity of skills at the right speed for each child
- A safe and stable environment



Serve & Return Builds Brains and Skills

- Ongoing, reliable interaction with trusted adults is essential for the development of healthy brain circuits
- Systems that support the quality of relationships in early care settings, communities, and homes help build brain architecture



- The Brake - PFC (with some hippocampal help)

Frontal lobes:

Abstract thought, reasoning, judgment, planning, impulse and affect regulation, consequences

Temporal lobe (outside):

Processing sound and language

Limbic System (inside):

Emotions and impulsivity

**+ The Gas Pedal +
Amygdala**

Brain Stem & Cranial Nerves:

Vital functions
Swallowing

Parietal Lobe:

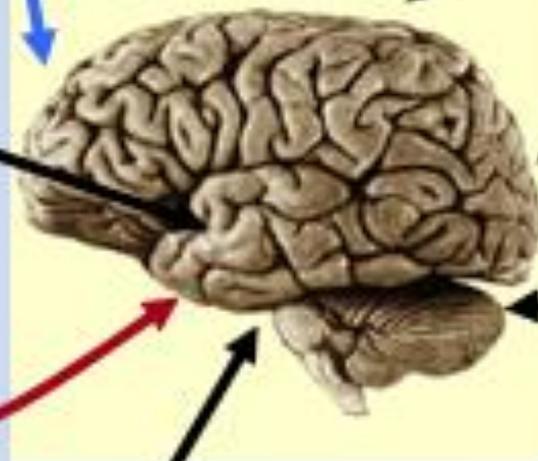
Integration of sensory data and movement

Occipital Lobe:

Visual processing

Cerebellum:

Smooth movements
Coordination



Early Childhood Stress Influences Developmental Outcomes

Positive Stress Response

- Brief increases in heart rate, mild elevations in stress hormone levels; important to development in the context of stable and supportive relationships

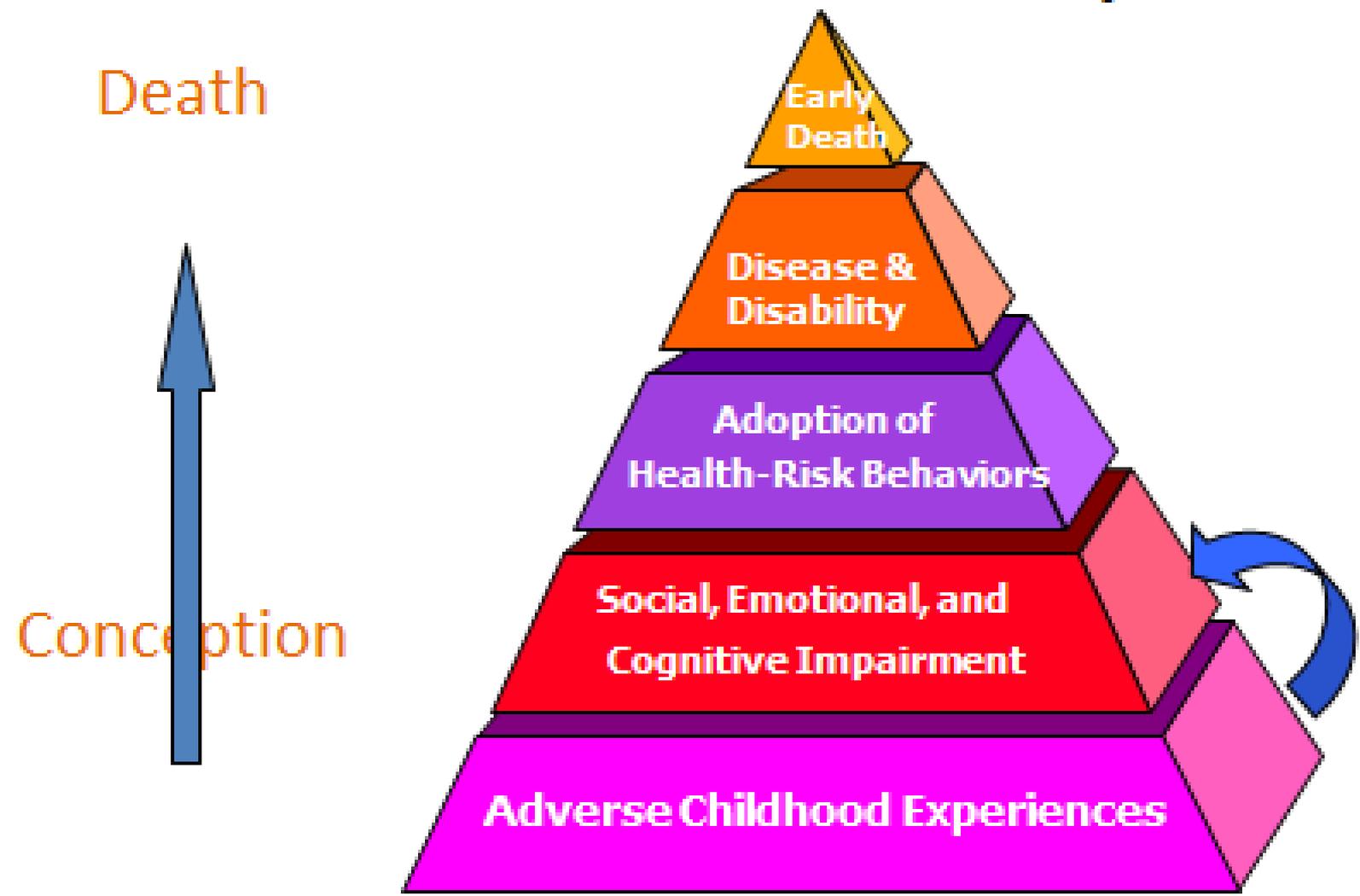
Tolerable Stress Response

- Serious and temporary, but impact buffered by supportive relationships and safe environments

Toxic Stress Response

- Prolonged activation of stress response systems in the absence of protective relationships; disrupts brain architecture, increases the risk of stress-related physical and mental illness

Understanding Impact of Adverse Childhood Experiences





Epigenetics

Interactive influences of genes and experience literally **shape** the architecture of the developing brain



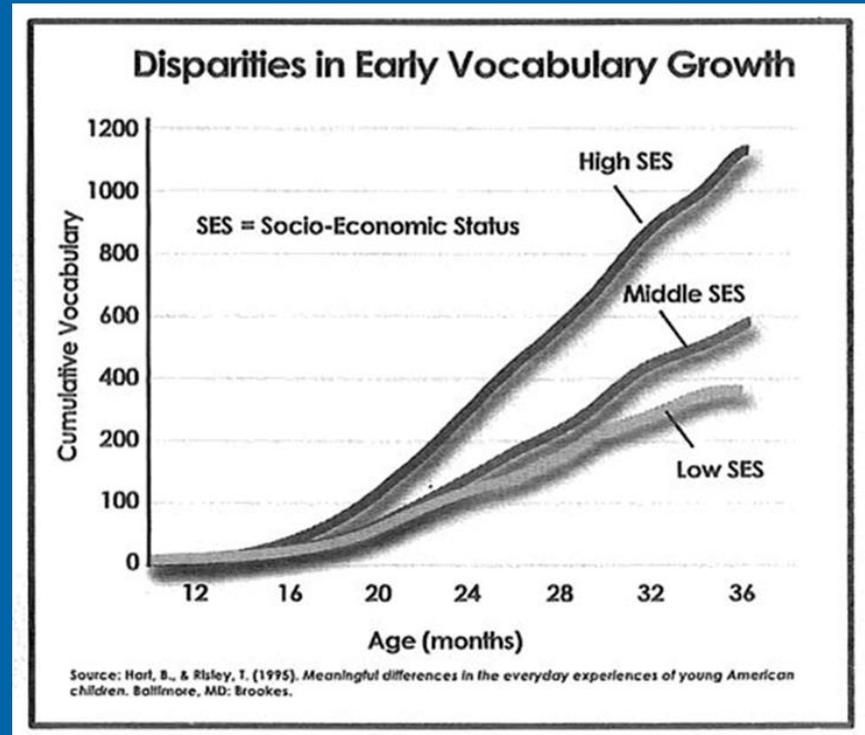
Relationships Buffer Toxic Stress

- Learning how to cope with moderate, short-lived stress can build a healthy stress response system
- Toxic stress (when the body's stress response system is activated excessively) can weaken brain architecture
- Without caring adults to buffer children, toxic stress can have long-term consequences for learning, behavior, and both physical and mental health



Meaningful Differences in the Everyday Experience of Young Children

- Children in professional homes heard 382 words an hour while children raised in welfare homes heard an average of 167 words an hour. In a month, the difference in words heard was 1,100 (professional) to 500 (welfare).



Public Investment in Children by Age





Starting school without early literacy skills puts children at risk for school failure

- 35% of U.S. children enter kindergarten unprepared to learn, most lacking the language skills that are the prerequisites of literacy acquisition (National Academy of Education, 1985)
- 33% of 4th graders perform below basic reading levels on national standardized tests for reading (National Assessment of Educational Progress, 2013)
- 35% of 4th graders in Oklahoma perform below basic reading levels on national standardized tests for reading (National Assessment of Educational Progress, 2013)
- 66% of students nationally compared to 70% in Oklahoma scored at below basic or basic level.



The Reach Out and Read Program

- Advice: Encourage parents to read aloud daily and offer age-appropriate advice
- Books: From 6 months through 5 years, clinicians give children a new, developmentally appropriate book at well child visits
- Environment: The practice is made into a literacy-rich environment with posters, gently used books, library information and volunteer readers where feasible

Advice

Medical providers offer parents literacy- and language-related **anticipatory guidance** and encourage **daily reading aloud** at home.



Reach
Out and
Read®



In the Exam Room: Anticipatory Guidance

Helps parents with age-appropriate expectations:

- 6-month-old babies put books in their mouths.
- 12-month-olds can point with one finger.
- 18-month-olds can turn board book pages.
- 2-year-olds may not sit still to listen to a book.
- 3-year-olds can re-tell familiar stories.





6-month visit

Teachable moment: Talk to your baby, read to your baby!

Bright Futures Guidelines

Socio-Emotional

- Is socially interactive with parent

Communicative

- Uses a string of vowels together

Cognitive

- Continues to use visual exploration to learn about the environment but is also beginning to use oral exploration

**Reach
Out and
Read®**





What We Just Saw: 6 Months

Child

- Initially Larry is not focused.
- He receives the book and his joy is apparent in his entire body!
- He calms, brings his hands to the midline, and focuses on the book.
- He makes rudimentary attempts to turn/stroke the page.

Parent

- Mom is so proud of Larry's interest and obvious glee.
- Mom lets him freely examine the book in part because the provider just said it was "ok."
- Mom has questions and is obviously engaged.

Books



At every **health supervision visit** from 6 months through 5 years, children receive a brand-new, developmentally-appropriate **book** to take home and keep.

Environment

Literacy-rich waiting areas include used books, posters, library information, and literacy resources. Volunteer readers sometimes read to waiting children, modeling the techniques and joys of reading aloud.





Compelling Evidence Base (15 studies) for literacy promotion in primary care

- Parental attitudes and practices change
- Home environment changes
- Children's attitudes change
- Children's skills change

Reach Out and Read: Leveraging the Existing System

Family and Pediatric Clinicians:

- Have **early and nearly universal access** to parents and children
- Have **repeated one-on-one contact** with families
- Provide **trusted guidance** about children's development and well-being
- Serve as an important **source of information and support**



Why Early Literacy Matters

Early Language and Literacy Skills



Kindergarten readiness



3rd grade Reading Proficiency



Graduation from High School



Path to success in school and life



where great stories begin™





Books Build Better Brains

- Children's language evolves primarily through parent/child interactions, "going back and forth" (serve & return)
- The brain's "architecture" is shaped by early experiences. Parents talking and reading with their child builds specific skills and connections. (repetition matters)
- Differences in children's skills are measurable as early as 9 months of age (starting early matters)
- Parents and children reading together build strong social-emotional bonds that help children learn (mediates toxic stress)



WHY Reach Out and Read?

Relational Development

Children's language –
and social/emotional
development –

evolve primarily through
parent/child interactions



Relational Development

- One mother's parenting skills were not well developed, and I discussed some things that should be happening... When I discussed daily reading to her children, she said "now that is something I can do."
—Reach Out and Read Provider (2013 Medical Consultant Survey)
- A mother was having difficulty with sibling rivalry, and was able to improve relationships among her children by focusing on books rather than behaviors.

**Reach
Out and
Read®**





What We Just Saw: 18-36 months

Child

- Knows his animal sounds
- Can point to objects
- Though quiet, Eli was totally engaged
- Increased attention span
- Development of left to right sequencing

Parent

- Lets child control book
- Can re-read stories
- Engages in verbal turn-taking
- Labels/describes
- Asks “wh” questions



Key aspects of responsive parenting impacting language/cognition

- Richness of verbal input – labeling objects and actions (Weizman, 2001)
- Verbal scaffolding – structuring language interaction to meet child's needs; providing child with language that they need (Vygotsky, 1978; Snow, 1977)
- Verbal responsivity – responding to vocalizations with imitations or expansions, engaging in back-and-forth conversation and asking questions (Hart and Risley, 1994)



Developmental Assurance

Humans do not develop in isolation; there is a need for affiliation.

Development proceeds through and by secure relationships.



Reach Out and Read Oklahoma

- 49 clinical locations
- 31,397 children participate annually
- 54,116 new books distributed annually



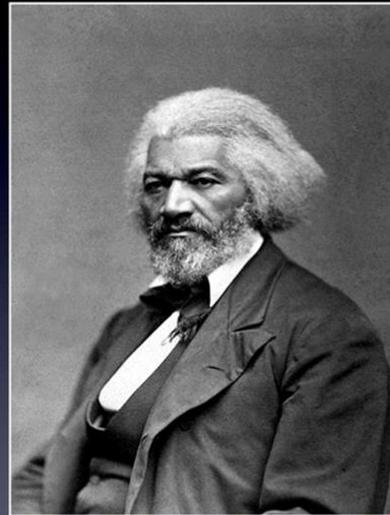
**Reach
Out and
Read®**



WHY Reach Out and Read?

**“It is easier to build
strong children than to
repair broken men.”**

**— Frederick Douglass
(1817–1895)**



Public-domain image



Thank You

